



# UNITED STATES PATENT AND TRADEMARK OFFICE

*W*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,952	01/22/2002	Sujoy Kumar Guha	RS-01420	4417

7590 09/22/2004

James Ray & Associates  
2640 Pitcairn Road  
Monroeville, PA 15146

EXAMINER

MITCHELL, GREGORY W

ART UNIT	PAPER NUMBER
----------	--------------

1617

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/936,952

Applicant(s)

GUHA, SUJOY KUMAR

Examiner

Gregory W Mitchell

Art Unit

1617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 30-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This office action is in response to Applicant's remarks filed on November 24, 2003. Claims 30-54 are pending and are examined herein.

#### ***Election/Restrictions***

Applicant's election without traverse of a mixture of styrene maleic anhydride copolymer and styrene maleic acid copolymer in the reply filed on November 24, 2003 is acknowledged.

#### ***Priority***

This application is a national stage application of PCT/IN00/00023, filed on March 16, 2000, which claims foreign priority to Indian application 415/DEL/1999, filed on March 17, 1999. Applicant's priority is acknowledged.

#### ***Claim Objections***

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 1-25 have been renumbered 30-54, respectively.

Newly numbered claims 36 and 37 are objected to because of the following informalities: they use the symbol " $\mu$ " to indicate a micron; either " $\mu\text{m}$ " or "micron" should be used. Appropriate correction is required.

Newly numbered claim 37 is objected to because of the following informality: it cites "upto" instead of "up to". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 30-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

In the present instance, claim 30 recites the broad recitation "contraceptive polymer is from the hydrogen class of polymers", and the claim also recites "particularly

a mixture of styrene maleic anhydride copolymer and styrene maleic acid copolymer” which is the narrower statement of the range/limitation. It is unclear which is supposed to be the invention. Is the claimed invention intended to be a composition comprising a contraceptive polymer from the hydrogen class of polymers or a composition comprising a mixture of styrene maleic anhydride copolymer and styrene maleic acid copolymer? Similarly, claim 30 recites broadly “an electrically conducting material”, and also narrowly recites that the “said electrically conducting material is copper.” Furthermore, claim 30 recites broadly “a magnetic material”, and also narrowly recites that the “said magnetic material is iron.” Accordingly, it is unclear which limitation is intended to be the limitation of the claimed invention.

In the present instance, claim 31 recites the broad recitation “styrene maleic acid copolymer and styrene maleic anhydride copolymer are taken in the ratio varying between 1.5:8.5 to 3:7”, and the claim also recites “preferably 2:8” which is the narrower statement of the range/limitation. Accordingly, it is unclear which limitation is intended to be the limitation of the claimed invention.

In the present instance, claim 34 recites the broad recitation “electrical conducting material is taken between 3-8%”, and the claim also recites “preferably between 4-6%” and “more preferably about 5%” which is the narrower statement of the range/limitation. Accordingly, it is unclear which limitation is intended to be the limitation of the claimed invention.

In the present instance, claim 35 recites the broad recitation “magnetic material is taken between 6-15%”, and the claim also recites “preferably between 8-12%” and

"more preferably about 10%" which are the narrower statements of the range/limitation. Accordingly, it is unclear which limitation is intended to be the limitation of the claimed invention.

In the present instance, claim 36 recites the broad recitation "microsize particles ... is about 0.005 to 20 $\mu$ ", and the claim also recites "preferably about 0.5 to 15 $\mu$ " which is the narrower statement of the range/limitation. Accordingly, it is unclear which limitation is intended to be the limitation of the claimed invention.

In the present instance, claim 37 recites the broad recitation "microsize particles ... is about 0.005 to 15  $\mu$ ", and the claim also recites "preferably about 0.5 to 15 $\mu$ " which is the narrower statement of the range/limitation. Accordingly, it is unclear which limitation is intended to be the limitation of the claimed invention.

In the present instance, claim 48 recites the broad recitation "solvent medium", and the claim also recites "particularly ... dimethyl sulfoxide" which is the narrower statement of the range/limitation. Accordingly, it is unclear which limitation is intended to be the limitation of the claimed invention.

In the present instance, claim 48 recites the broad recitation "inert atmosphere", and the claim also recites "preferably nitrogen" which is the narrower statement of the range/limitation. Accordingly, it is unclear which limitation is intended to be the limitation of the claimed invention.

In the present instance, claim 49 recites the broad recitation "magnetic material", and the claim also recites "preferably coated magnetic material" which is the narrower

Art Unit: 1617

statement of the range/limitation. Accordingly, it is unclear which limitation is intended to be the limitation of the claimed invention.

Claim 30 is also rejected for being vague and indefinite because it refers to copper "in its pure form" and to iron "in its pure form." It is unclear what Applicant intends to mean by these phrases. Applicant could intend to limit the claims to a composition comprising copper, which has been purified in a particular manner, or Applicant could intend to limit the claims to copper that is in elemental form. Similarly, Applicant could intend to limit the claims to a composition comprising iron, which has been purified in a particular manner, or Applicant could intend to limit the claims to iron that is in elemental form. For examination purposes, this claim is interpreted as referring to elemental iron and elemental copper.

Claim 33 is rejected for being vague and indefinite because the phrase "each varies between 3 to 20%" is unclear. It is unclear if Applicant intends each to independently vary between 3 and 20% or if each is intended to have an identical weight percentage to the other, which is between 3 and 20%. Furthermore, the term "varies" is, itself, unclear. It is not clear how a composition comprising a certain weight percentage of a component can have a varying amount of that component. It is Examiner's interpretation that Applicant intends for the claim to read that the amount of material is between 3 and 20%. For examination purposes, Examiner interprets the claim as reading upon: each being *independently* between 3 and 20%.

Claim 32 recites the limitation "said magnetic material is iron in the form of oxide". There is insufficient antecedent basis for this limitation in the claim.

Claim 47 recites the limitation "said external means". There is insufficient antecedent basis for this limitation in the claim.

Independent claim 48 recites the limitation "said magnetic material". There is insufficient antecedent basis for this limitation in the claim.

Independent claim 48 recites the limitation "said electrically conducting material". There is insufficient antecedent basis for this limitation in the claim.

Furthermore, claims 31-47 and claims 49-54 are rejected for depending on an indefinite claim. Each of the rejected claims is examined on the basis of the broadest possible interpretation of the claim. Therefore, the claims with broad limitations followed by narrow limitations are interpreted as being only limited to the broad limitations.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 30-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guha (USPN 5488075) in view of each of Young et al. (USPN 5817017), Riar, et al. (*Andrologia*, 1982, 14(6), 481), and Jakubek, et al. (GB 2 121 289 A).

Guha teaches the use of a styrene maleic anhydride copolymer with DMSO as a contraceptive (col. 1, lines 54-62). It is further taught that when injected into the vas deferens, the contraceptive copolymer hydrolyzes in the presence of water molecules in the spermatid fluid (col. 2, line 45-col. 3, line 7). Accordingly, it is Examiner's



interpretation, that Guha teaches a composition comprising DMSO and a mixture of styrene maleic anhydride copolymer and the hydrolyzed copolymer thereof, namely styrene maleic acid copolymer.

Guha does not teach a composition further comprising a magnetic material and an electrically conducting material.

Young et al. teaches the use of magnetic particles within catheters and other medical devices, particularly those devices composed of organic polymers, for enhanced detectability when viewed using magnetic resonance imaging (col. 1, lines 26-57; col. 2, line 55-col. 5, line 59). Young et al. specifically teaches the use of small iron, including elemental iron and iron oxides, particles of a size less than 20  $\mu\text{m}$  in catheters and other devices (col. 10, lines 42-63).

Riar et al. teaches that copper deposited into the vasa deferentia of animals is effective at achieving a male contraception for 9 months (bottom of page 490-top of page 491).

Jakubek et al. teaches the use of a polymer mixed with 1 to 30% weight of a powdered metal, such as copper, as a contraceptive. The powdered metal is distributed throughout the polymer material and has a particle size of 2 to 50  $\mu\text{m}$ . (Abstract.)

It would have been obvious to one of ordinary skill in the art to combine iron particles of a size less than 20 $\mu\text{m}$  with the DMSO/polymer composition taught by Guha because, as taught by Young et al., iron particles are useful for enhancing magnetic resonance viewing of polymeric medical devices. Furthermore, it would have been obvious of one of ordinary skill in the art to add copper to the composition because it is

Art Unit: 1617

obvious to one of ordinary skill in the art to combine two compositions each of which is taught by the prior art to be individually useful for the same purpose, in order to form a third composition which is to be used for the very same purpose. *In re Kerkhoven* 205 USPQ 1069 (CCPA 1980). Therefore, it would have been obvious to combine copper particles in the size of 2 to 50 $\mu$ m to the afore mentioned composition because (1) copper is known to be, itself, capable of contraception, as taught by Riar et al. and (2) polymeric contraceptives which include metallic components, such as copper, include said metallic components in particle sizes of 2 to 50 $\mu$ m, as taught by Jakubek et al. It would have been obvious to incorporate the copper particles into the composition as claimed herein, because the weight percentage of the copper particles claimed herein fall within the range taught by Jakubek et al.

One would have been motivated to combine iron and copper particles to the composition of Guha because of (1) an expectation of providing a means of locating said composition once it had been implanted into the body, as taught by Young et al., and (2) an expectation of success in preparing a composition capable of producing similar results in contraceptive behavior due to the ability of each component to individually affect contraception, as taught by Riar et al., respectively.

It is noted that since the macrosized particles are capable of being the same size as the microsize particles that a composition comprising particles of microsize, as defined by Applicant will, alone, meet the limitations of claims 37-39. It is also noted that a metal particles within a polymer composition will obviously be coated with that polymer. Furthermore, it is noted that Young et al. does not teach the desired weight

Art Unit: 1617

percentage of the magnetic material. It is Examiner's position, however, that it would have been obvious to one of ordinary skill in the art to utilize the weight percentages of the magnetic material, as claimed herein, because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory W Mitchell whose telephone number is 571-272-2907. The examiner can normally be reached on M-F, 8 AM - 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gwm



**SREENI PADMANABHAN**  
SUPERVISORY PATENT EXAMINER